

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0021] in the specification with the following amended paragraph:

[0021] A fourteenth aspect of the present invention is the optical signal quality monitoring circuit of any one of the first aspect through tenth aspects, wherein the repetition frequency f_1 satisfies the formula of $f_1 = (n/m)f_0 \pm a$ and $[(n/m)^2 \{k + (n/m)\} f_0 = a <] \quad (n/m)^2 / \{k + (n/m)\} f_0 \leq a < (n/m)^2 / \{k + (n/m) - 1\} f_0$ (n , m and k are natural numbers), and the signal processing means is comprised of processing means for detecting a preponderant portion of an eye opening of the eye pattern obtained by overwriting digital data for every k unit, Q value calculation processing means in which a frequency peak is detected for the respective distributions of the mark part and the space part around the part which is a maximum of the eye opening to determine the average value and the standard deviation from which the Q value is calculated, Q value correction processing means for correcting the Q value according to the signal bit rate of the optical signal, averaging processing means for measuring the corrected Q values multiple times and averaging the corrected Q values, Q value memory means for memorizing the corrected and averaged Q value, and alarm transfer means for transferring an alarm when the corrected and averaged Q value is lower than a reference Q value which is previously memorized.

Please replace paragraph [0026] in the specification with the following amended paragraph:

[0026] A nineteenth aspect of the present invention is the optical signal quality monitoring method of the fifteenth aspect, wherein the step of converting an electrical signal to digital sampling data through an analog to digital conversion samples the electrical signal by a repetition frequency f_1 which satisfies $f_1 = (n/m)f_0 \pm a$ and $[(n/m)^2 \{k + (n/m)\} f_0 = a <] \quad (n/m)^2 / \{k + (n/m)\} f_0 \leq a < (n/m)^2 / \{k + (n/m) - 1\} f_0$ (n , m and k are natural numbers), and the step of evaluating optical signal quality parameters of the optical signal comprising a step of detecting a preponderant portion of an eye opening of the eye pattern obtained by overwriting digital data for every k unit, a step in which a frequency peak is detected for the respective distributions of the mark part and space part around the part which is a maximum of the eye opening to determine the average value and the standard deviation, from which the Q value is calculated, a step of correcting the Q value according to the

signal bit rate of the optical signal, a step of measuring the corrected Q values multiple times and averaging the corrected Q value, a step of memorizing the corrected and averaged Q value, and a step of transferring an alarm when the corrected and averaged Q value is lower than a reference Q value which is previously memorized.

Please replace paragraph [0087] in the specification with the following amended paragraph:

[0087] In this instance, the repetition frequency f_1 can be adjusted so as to satisfy $f_1 = (n/m)f_0 \pm a$ and $[(n/m)^2 \{k + (n/m)\} f_0 = a <] \underline{(n/m)^2 / \{k + (n/m)\} f_0 \leq a < (n/m)^2 / \{k + (n/m) - 1\} f_0}$ (n, m and k are natural numbers), and where K is equal to $p \cdot k$ (p is a positive integer), N can be expressed to be equal to $(n/m)^{-1} p$.

Please replace paragraph [0100] in the specification with the following amended paragraph:

[0100] In this instance, the repetition frequency f_1 can be adjusted so as to satisfy $f_1 = (n/m)f_0 \pm a$ and $[(n/m)^2 \{k + (n/m)\} f_0 = a <] \underline{(n/m)^2 / \{k + (n/m)\} f_0 \leq a < (n/m)^2 / \{k + (n/m) - 1\} f_0}$ (n, m and k are natural numbers), and where K is equal to $p \cdot k$ (p is a positive integer), N can be expressed to be equal to $(n/m)^{-1} p$.